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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,718	12/04/2003	Igor Bragin	LMPY-18910 [345/U]	6893
28584	7590	04/10/2006	EXAMINER	
STALLMAN & POLLOCK LLP 353 SACRAMENTO STREET SUITE 2200 SAN FRANCISCO, CA 94111			VAN ROY, TOD THOMAS	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,718

Applicant(s)

BRAGIN ET AL.

Examiner

Tod T. Van Roy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 15, 16, 18-24 and 37-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 15, 16, 18-24 and 37-45 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The examiner acknowledges the amending of claims 1, 11, 16, 18, as well as the cancellation of claims 3, 12-14, 17, 25-36, and addition of new claims 38-45.

Response to Arguments

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

The examiner agrees that the references applied in the previous rejections of claims 11-36 do not properly read on these, or the new claims, and the previous rejection of the non-cancelled claims is withdrawn.

Please see below for new rejections to claims 1-10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2, 4-7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller-Horsche (US 5247534).

With respect to claim 1, Muller-Horsche teaches an electrode structure for a gas discharge laser comprising: an elongated electrode body capable of functioning as one of an anode and a cathode in order to energize a gas mixture in the discharge chamber (fig.1 #10a), the electrode body including a central nose portion (fig.1 #10a, portion not covered by #16a) and at least one shoulder portion extending away from the nose portion (fig.1 #10a, portions on either side of nose, covered by #16a); and an elongated insulating spoiler coupled with the shoulder portion of said electrode body (fig.1 #16/16a, col.4 lines 54-58) and configured to define an arcuate region which terminates at said central nose portion (spoilers on either side of nose form bow shaped region, fig.1) in order to reduce arcing between the shoulder portion and a component of the discharge chamber (insulating material would reduce arcing to other components such as #28/28a) and minimize turbulence across the electrode body (less resistance due to bow shape). Muller-Horsche does not teach the insulating spoilers to be ceramic. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a ceramic (insulating) material to comprise the insulating spoiler of Muller-Horsche as Mueller-Horsche teaches the use of ceramics for electrical insulation in other areas of the laser device (col.7 lines 30-33).

With respect to claim 2, Muller-Horsche teaches the electrode structure as outlined in the rejection to claim 1, and further teaches the electrode body (fig.1 #10a + 24) has a channel for accepting a tongue portion of an insulating member (fig.1 #16).

With respect to claim 4, Muller-Horsche teaches the nose portion of the electrode body has a length that provides for a proper discharge while limiting the effect on a flow of the gas mixture in the discharge chamber (proper discharge is inherently present or the device would not operate, shape of the electrode is smooth facilitating clean path for the gas to flow over).

With respect to claim 5, Muller-Horsche teaches a portion of the ceramic spoiler exposed to the gas mixture has a substantially smooth finish (interior sides near electrodes has a flat surface which would facilitate gas flow), in order to minimize turbulence in the gas mixture.

With respect to claim 6, Muller-Horsche teaches at least a portion of the ceramic spoiler exposed to the gas mixture is shaped to tangentially follow a flow of gas mixture through the discharge chamber (interior sides near electrodes has a flat surface which would facilitate gas flow).

With respect to claims 7 and 10, Muller-Horsche teaches the electrode structure as outlined in the rejection to claim 1, and further teaches a mounting structure (constituted by the walls of the channel in the electrode body, and reinforced by the pressure cover #26, and the capacitors #22, flexible in that the holder is stable for various pressures – col.4 lines 62-68) for holding the tongue portion of the insulator.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller-Horsche in view of Fein et al. (US 4122411).

With respect to claim 8, Muller-Horsche teaches the electrode structure as outlined in the rejection to claim 7, but does not teach the use of a clip in the tongue and channel connection. Fein teaches a gas laser wherein a clip mount is used to attach a ceramic to an electrode (fig.12, col.16 lines 21-37, 44-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the mounting structure of Muller-Horsche with the clip mount of Fein in order to stabilize the insulator in the proper position (Fein, col.16 lines 44-48).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller-Horsche and further in view of Malburg et al. (US 4257012).

With respect to claim 9, Muller-Horsche teaches the electrode structure as outlined in the rejection to claim 7, but does not teach the mounting structure to be made of a Copper-Beryllium alloy and to be covered by nickel. Malburg teaches an assembly for a gas laser wherein a Copper-Beryllium alloy and nickel plating is used (col.3 line 18, col.4 line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the electrode structure of Muller-Horsche with the Copper-Beryllium alloy of Malburg in order to use a material with good heat conducting and strength properties (Malburg, col.3 lines 15-18), and plate with nickel in order to prevent corrosion (col.3-4 lines 65-3).

Allowable Subject Matter

Claims 11, 15-16, 18-24, 37, and 38-45 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 11, 38, and 42 are believed to be allowable as an electrode/spoiler configuration for a gas laser system having the specific shapes and connection types was not found to be in the prior art, or an obvious combination of the prior art. Namely the electrode shoulder channel having a narrow opening, tapered to a wider width, with the ceramic spoiler piece having the opposite shape (projection, narrow near to the bulk of the spoiler and wide near the end) in order to slide into the electrode channel and to be secured via a spring attachment was found to be non-obvious in regards to the prior art. Prior art such as Muller-Horsche (US 5247534) or Caristi et al. (US 3921097) teach electrode channels with spoiler projections, but not tapered or utilizing spring connections. Fleurov et al. (US 6466602) teaches an electrode support (fig.19) which has a tapered shape, similar, but opposite to the instant invention, and used in a different configuration, and is not secured via a spring attachment.

Claims 15-16, 18-24, 37, 39-41, and 43-45 are allowable as they depend from allowable claims 11, 38 and 42.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For the reasons stated above, Caristi (US 3921097) and Fleurov (US 6466602) are thought to be pertinent.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

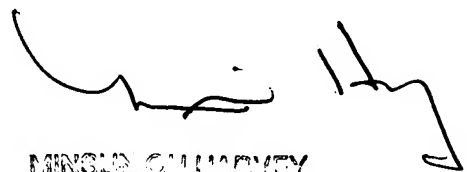
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod T. Van Roy whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVR



MIN SUN HARVEY
PATENT EXAMINER